Applicant: Michael J. Beaver, et al. Attorney's Docket No.: 07406-016001

Serial No.: 10/007,902

Filed: November 8, 2001

Page : 2 of 13

## Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

## Listing of Claims:

- 1. (Withdrawn) A soybean meal having a statistically significant reduction in isoflavone content compared to a meal prepared without extracting any germ fraction.
- 2. (Withdrawn) The soybean meal of claim 1, wherein the mass percent isoflavone content of the soybean meal is 2-30 percent lower than that of the meal prepared without extracting any germ fraction.
- 3. (Withdrawn) A crude soybean oil having a sterol content 2-30 percent lower than oil prepared without extracting any germ fraction.
- 4. (Withdrawn) A soy germ concentrate having a sterol content of from about 1.6 to 3.0 weight percent.
- 5. (Withdrawn) The soy germ concentrate of claim 4 wherein the sterol content is from about 1.8 to 2.5 weight percent.
- 6. (Withdrawn) The soy germ concentrate of claim 4 having an isoflavone content of from about 2.4 to 3.0.
- 7. (Withdrawn) A soy germ concentrate having an isoflavone content of from about 2.4 to 3.0.

Applicant: Michael J. Beaver, et al.

Attorney's Docket No.: 07406-016001

Serial No.: 10/007,902

Filed: November 8, 2001

Page : 3 of 13

8. (Withdrawn) The soy germ concentrate of claim 7 wherein the isoflavone content is from about 2.6 to 2.9.

- 9. (Withdrawn) The soy germ concentrate of claim 7 comprising at least 75% soy germ.
- 10. (Currently Amended) A method of producing a soy germ concentrate comprising: (a) cracking whole soybeans to produce a cracked soybean stream having a cracked size such that about 50% of the cracked particles are larger than 3.35 mm; (b) prior to any further cracking, separating soy germ from a the cracked soybean stream; and (c) after separating, further processing the cracked soybean stream that remains after the soy germ has been removed to produce a soybean product wherein the cracked soybean stream has a cracked size such that about 50% of the cracked particles are larger than 3.35 mm.
  - 11. (Cancelled)
- 12. (Original) The method of claim 10 further comprising dehulling the separated soy germ.
- 13. (Original) The method of claim 10 wherein the cracked soybean stream has a moisture content of at least 8% by weight.
- 14. (Original) The method of claim 13 wherein the moisture content is from about 9 to 11%.
- 15. (Currently amended) The method of claim 10 further comprising, after separating, wherein the further processing the remaining cracked soybean stream to produce comprises producing soybean oil and soybean meal.

Applicant: Michael J. Beaver, et al. Attorney's Docket No.: 07406-016001

Serial No.: 10/007,902

Filed: November 8, 2001

Page : 4 of 13

16. (Currently amended) An in-line production process for separating a cracked soybean stream wherein the stream contains soybean meats, germ, and hulls, the process comprising:

- (a) separating a portion of the germ from the steam stream to produce a soy germ concentrate and a remaining stream; and
- (b) after step (a), processing the remaining stream to form soybean oil and solvent laden white flakes.
- 17. (Original) The production process of claim 16 wherein steps (a) and (b) are performed as part of a continuous process.
- 18. (Original) The production process of claim 16 wherein step (b) comprises further cracking the remaining stream.
- 19. (Original) The production process of claim 16 or 18 wherein step (b) comprises removing a portion of the hulls from the stream.
  - 20. (Original) The production process of claim 16 wherein step (b) comprises flaking.
- 21. (Original) The production process of claim 16 wherein the cracked soybean stream has a moisture content of at least 8% by weight.
- 22. (Original) The production process of claim 16 wherein the solvent laden white flakes are further processed into soy meal or white flakes.
- 23. (Original) The production process of claim 22 wherein the further processing comprises desolventizing.

Applicant: Michael J. Beaver, et al. Attorney's Docket No.: 07406-016001

Serial No.: 10/007,902

Filed: November 8, 2001

Page : 5 of 13

24. (Original) The production process of claim 23 wherein the further processing further comprises toasting.

- 25. (Original) The production process of claim 16 wherein the soybean oil is further processed through refining.
- 26. (Original) The production process of claim 21 wherein the moisture content is from about 9 to 11%.
  - 27. (Original) A process comprising:
  - (a) cracking soybeans to form a first soybean product;
- (b) separating the first soybean product to form a soy germ concentrate and a second soybean product;
  - (c) cracking the second soybean product to form a third soybean product; and
- (d) processing the third soybean product to form soybean oil and solvent laden white flakes.
- 28. (Original) The process of claim 27 wherein step (a) comprises cracking the soybeans to a cracked size such that about 50% of the cracked particles are larger than 3.35 mm.
- 29. (Original) The process of claim 27 wherein steps (a)-(d) are performed as part of a continuous process.
  - 30. (Original) The process of claim 27 wherein step (d) includes dehulling and flaking.
- 31. (Currently amended) The process of claim 30 further comprising (e) desolventizing and toasting the solvent laden white flakes to form soy meal.

Applicant: Michael J. Beaver, et al.

Attorney's Docket No.: 07406-016001

Serial No.: 10/007,902

Filed: November 8, 2001

Page : 6 of 13

32. (Original) The process of claim 31 further comprising (f) cooling and grinding the toasted soy meal.

- 33. (Original) The process of claim 27 wherein the soybean oil is further processed through refining.
- 34. (Original) The process of claim 27 further comprising (e) flash desolventizing the solvent laden white flakes.
- 35. (Original) The process of claim 27 wherein the cracked soybean stream has a moisture content of at least 8% by weight.
- 36. (Original) The process of claim 35 wherein the moisture content is from about 9 to 11%.
- 37. (Withdrawn) A manufacturing plant for processing soybeans, including a production line comprising, in series:
- (a) a first cracking machine configured to produce a first soybean product containing germ, broken meats and hulls;
- (b) a separation device configured to separate at least a portion of the germ from the first soybean product to form a soy germ concentrate and a second soybean product;
- (c) a second cracking machine, configured to further crack the second soybean product to form a third soybean product.
- 38. (Withdrawn) The manufacturing plant of claim 39 further comprising, after the second cracking machine, (d) a dehulling machine for separating at least a portion of the hulls from the third soybean product.

Applicant: Michael J. Beaver, et al.

Attorney's Docket No.: 07406-016001

Serial No.: 10/007,902

Filed: November 8, 2001

Page : 7 of 13

39. (Withdrawn) The manufacturing plant of claim 37 further comprising, after the dehulling machine, (e) a flaking machine, and (f) a solvent extraction machine.

- 40. (Currently amended) A method of producing a soy germ concentrate comprising separating soy germ from a cracked soybean stream wherein the <u>cracked soybean</u> stream contains soybean meats, germs and hulls, the method comprising separating the germs from the meats based on the respective sizes of the germs and meats.
- 41. (Withdrawn) A soy germ concentrate having a sterol content of from about 1.6 to 3.0 weight percent and containing at least 40% soy germ.
- 42. (Withdrawn) The soy germ concentrate of claim 41 wherein the concentrate contains from about 40 to 75% soy germ.
  - 43. (Withdrawn) A solvent extracted soybean meal containing less than 1.5% soy germ.
- 44. (Withdrawn) A toasted soy germ meal having a total isoflavone content of greater than 2.5%.